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A profile of Hawaii's elderly population

Eleanor C. Nordyke,
Richard K.C. Lee,
and Robert W. Gardner

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PREFACE

The consequences of aging have profound implications for the structure of the economic, health, political, and social conditions of a society. About one out of ten residents of Hawaii is now over age 65, and the lifespan of this group is among the longest in the nation. A demographic focus on this rapidly expanding and important component of the population provides current information and knowledge for more effective planning and policymaking.

A preliminary version of this paper was presented to the International Conference on Cross-Cultural Sensitivity to the Needs of the Asian-Pacific Elderly, in Honolulu in May 1981. The paper was expanded following cooperative studies that resulted in *The Elderly in Hawaii,* a data digest published in 1982 by the Executive Office on Aging and the Commission on Population and the Hawaiian Future, State of Hawaii. Primary data sources, including the U.S. Census, vital registration, and official state and territory publications, have been used, as well as information from the State Department of Planning and Economic Development, the annual Hawaii Health Surveillance Program, and the 1975 Hawaii Census Update Survey conducted by Survey and Marketing Services, Inc.

The authors wish to extend special appreciation to Robert C. Schmitt, State Statistician; to Sandra Ward for editorial assistance; to Jacqueline D'Orazio, Richard Rhodes, and Marcie Prins for graphics; to Gail Yamanaka and staff for secretarial work; and to Lois Bender for final production.

ABSTRACT The elderly, persons of ages 65 and over, represent one of the most rapidly expanding components of Hawaii's population. Between 1900 and 1980 this group increased from 1.7 percent to 7.9 percent of the total resident population, and in the 1970–80 decade the number of persons in this age category grew by 72.6 percent. It is expected that this increasingly important segment of the population will represent almost 12 percent of the inhabitants of the Hawaiian Islands in the year 2000.

Many factors are associated with the past and projected growth of the elderly population. They include falling mortality rates, reflecting higher levels of health care that result in longer life expectancy; lower levels of fertility, which contribute to an increased proportion of older persons; and migration influences from recent arrivals as well as from the aging of persons who migrated to Hawaii during the past century.

There is an increasing proportion of very old persons among the elderly population. The historically high male-to-female ratios that resulted from early labor policies favoring male dominant migration are falling with the changing sex composition of migrants.

The elderly reflect the multiracial character of the total population. Japanese, Caucasians, Filipinos, and Chinese have the largest number of older persons; the Japanese and Chinese show the highest proportions within their populations.

Educational levels of the elderly have been rising. Over 14 percent of all persons 65 years old and over participate in the labor force, and unemployment levels are similar to those for the total labor force. Earnings of the employed elderly are lower than the average for the total population, but elderly incomes are supplemented with pension, retirement, and other sources of revenue.

The elderly of Hawaii enjoy better health than older persons in the nation as a whole. Figures show fewer acute and chronic illnesses, lower rates of hospitalization, and longer life expectancy than for the total U.S. population. Cultural and socioeconomic factors, such as relatively high rates of marriage and larger proportions of elderly who reside with their families, may contribute to the favorable demographic indices of this island population group.

In Hawaii, that segment of the population known as the "elderly" has been growing rapidly in recent years. In the 1970–80 decade this group increased by 72.6 percent, from 44,116 to 76,150, while the total population grew by 25.5 percent. In 1980 the elderly accounted for 7.9 percent of the total resident population, compared with 5.7

percent in 1970 and only 1.7 percent in 1900. Recent demographic trends indicate that the number of elderly and their share of the state population will continue to expand in the coming years.

DEFINITION

Who are the "elderly," the "senior citizens," the "aged" in Hawaii? Definitions vary, and we know that human beings respond with wide variation to factors of heredity and environment (Soldo, 1980:4–6). Chronological age does not necessarily reflect functional ability. For consistency, and acknowledging the most common definition of the elderly, we have chosen to use this term to refer to persons of ages 65 and over. The Social Security Act of 1935 officially used age 65 to designate recipients of full retirement benefits (although recent changes in the law will raise this age slightly in the future), and state business planners and private industries often choose this age as the age of retirement.

The elderly span more than a 35-year age range and exhibit diverse behavior, attitudes, and problems. Those in the younger ages may differ markedly from those in the older ages. In this study whenever possible the elderly are subdivided into the "young-old" (ages 65–74), the "old" (ages 75–84), and the "old-old" (ages 85 and above). (See APHA, 1982:207.)

These groupings of the elderly can be identified with birth cohorts that reflect the economic, political, and social history of the state. In 1980, individuals of ages 65–74 were the survivors of those who were born in 1906–15, the period when Hawaii was a young territory of the United States. Some of those persons were not born in Hawaii but migrated here from abroad, as was even more true of the older members of the elderly. Those who were 75–84 years old in 1980 were from the cohort born in 1896–1905, the time of the new Hawaiian Republic and of its annexation to the United States. Individuals of ages 85 and over were born in 1895 or earlier, when Hawaii was an independent kingdom (until 1893) or in a stage of political unrest under a provisional government (Daws, 1968:251–311).

THE ELDERLY AS A PART OF HAWAII'S POPULATION

The size of Hawaii's elderly population has grown steadily over the years of this century (Table 1, Figure 1), with an average growth rate of 4.2 percent annually, compared with a growth rate for the total

TABLE 1. Numbers, median age, and growth rates of total and elderly populations: Hawaii, 1900–2000

Population	1900			1910			1920		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
All ages	106,369	47,632	154,001	123,099	68,810	191,909	151,146	104,766	255,912
Ages 65+	1,744	933	2,677	2,188	1,050	3,238	3,351	1,444	4,795
65–69	851	332	1,183	1,073	431	1,504	1,887	651	2,538
70–74	434	263	697	567	284	851	796	365	1,161
75+	459	338	797	548	335	883	668	428	1,096
Median age (years)									
Total population	28.3	22.3	26.9	29.1	20.7	26.4	26.3	19.3	23.3
Ages 65+	70.2	72.5	71.1	70.2	71.7	70.7	69.4	71.0	69.7
Growth rate[a]									
Total population	5.94	4.21	5.37	1.46	3.68	2.20	2.05	4.20	2.95
Ages 65+	u	u	u	2.27	1.18	1.90	4.26	3.19	3.93
% of ages 65+ in total population	1.6	2.0	1.7	1.8	1.5	1.7	2.2	1.4	1.9
% of elderly population									
Ages 65+	100.0	100.0	100.0	99.9	100.0	100.0	100.0	100.0	100.0
65–69	48.8	35.6	44.2	49.0	41.1	46.4	56.3	45.1	52.9
70–74	24.9	28.2	26.0	25.9	27.0	26.3	23.8	25.3	24.2
75+	26.3	36.2	29.8	25.0	31.9	27.3	19.9	29.6	22.9

TABLE 1. *(continued)*

Population	1930			1940		
	Male	Female	Total	Male	Female	Total
All ages	222,640	145,696	368,336	245,135	178,195	423,330
Ages 65+	5,402	2,236	7,638	8,559	4,355	12,914
65–69	2,849	1,009	3,858	4,472	2,193	6,665
70–74	1,438	575	2,013	2,295	1,152	3,447
75+	1,115	652	1,767	1,792	1,010	2,802
Median age (years)						
Total population	23.8	17.5	21.7	24.6	20.7	23.2
Ages 65+	69.7	70.2	69.9	69.8	70.0	69.8
Growth rate[a]						
Total population	3.87	3.30	3.64	0.96	2.01	1.39
Ages 65+	4.78	4.37	4.66	4.60	6.67	5.25
% of ages 65+ in total population	2.4	1.5	2.1	3.5	2.4	3.1
% of elderly population						
Ages 65+	99.9	100.0	100.0	99.9	100.1	100.0
65–69	52.7	45.1	50.5	52.2	50.4	51.6
70–74	26.6	25.7	26.4	26.8	26.5	26.7
75+	20.6	29.2	23.1	20.9	23.2	21.7

TABLE 1. *(continued)*

Population	1950			1960			1970		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
All ages	273,895	225,899	499,794	338,173	294,599	632,772	399,205	369,356	768,561
Ages 65+	12,382	8,037	20,419	15,712	13,450	29,162	22,254	21,862	44,116
65–69	4,979	3,449	8,428	5,527	5,432	10,959	9,671	7,987	17,658
70–74	3,665	2,306	5,971	5,021	3,667	8,688	5,781	6,050	11,831
75–79	3,738	2,282	3,570	5,164	4,351	5,090	6,802	7,825	7,021
80–84	b	b	1,604	b	b	2,845	b	b	4,593
85+	b	b	846	b	b	1,580	b	b	3,013
Median age (years)									
Total population	26.2	23.6	24.9	24.5	24.1	24.3	24.7	25.5	25.0
Ages 65+	71.6	71.2	71.5	72.3	71.8	72.1	71.3	72.4	71.9
Growth rate[a]									
Total population	1.10	2.37	1.66	2.11	2.66	2.36	1.66	2.26	1.94
Ages 65+	3.69	6.13	4.58	2.38	5.15	3.56	3.48	4.86	4.14
% of ages 65+ in total population	4.5	3.6	4.1	4.6	4.6	4.6	5.6	5.9	5.7
% of elderly population									
Ages 65+	100.0	100.0	100.0	100.1	100.0	100.1	100.1	100.0	99.9
65–69	40.2	42.9	41.3	35.2	40.4	37.6	43.5	36.5	40.0
70–74	29.6	28.7	29.2	32.0	27.3	29.8	26.0	27.7	26.8
75–79	30.2	28.4	17.5	32.9	32.3	17.5	30.6	35.8	15.9
80–84	b	b	7.9	b	b	9.8	b	b	10.4
85+	b	b	4.1	b	b	5.4	b	b	6.8

TABLE 1. *(continued)*

Population	1980			1990 (projected)			2000 (projected)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
All ages	494,683	470,008	964,691	578,500	560,000	1,138,400	639,900	627,900	1,267,800
Ages 65+	38,359	37,791	76,150	58,300	66,000	124,100	70,300	89,100	159,500
65–69	15,384	13,769	29,153	19,100	20,900	40,000	20,900	24,200	45,200
70–74	10,991	9,231	20,222	15,500	16,700	32,200	17,400	20,900	38,300
75–79	6,796	6,877	13,673	11,100	12,100	23,100	13,400	17,000	30,400
80–84	3,177	4,364	7,541	6,900	8,000	14,800	9,200	12,400	21,600
85+	2,011	3,550	5,561	5,700	8,300	14,000	9,400	14,600	24,000
Median age (years)									
Total population	27.7	29.1	28.4	30.1	32.5	31.3	32.2	35.3	33.7
Ages 65+	71.7	72.8	72.1	73.2	73.6	73.4	74.1	74.9	74.5
Growth rate[a]									
Total population	2.14	2.41	2.27	1.53	1.72	1.62	1.01	1.14	1.08
Ages 6E+	5.44	5.47	5.46	4.19	5.58	4.88	1.87	3.00	2.51
% of ages 65+ in total population	7.8	8.0	7.9	10.1	11.8	10.9	11.0	14.2	12.6
% of elderly population									
Ages 65+	100.0	99.9	100.0	100.0	100.0	99.9	100.1	100.1	99.9
65–69	40.1	36.4	38.3	32.8	31.7	32.2	29.7	27.2	28.3
70–74	28.7	24.4	26.6	26.6	25.3	25.9	24.8	23.5	24.0
75–79	17.7	18.2	17.9	19.0	18.3	18.6	19.1	19.1	19.1
80–84	8.3	11.5	9.9	11.8	12.1	11.9	13.1	13.9	13.5
85+	5.2	9.4	7.3	9.8	12.6	11.3	13.4	16.4	15.0

SOURCES: Hawaii, DPED (1984, table 13); Nordyke (1977: table 4A); Schmitt (1977: tables 1.9 and 1.11); United States, BOC (1953: table 10; 1961: table 16; 1971: table 20; 1982: table 19).

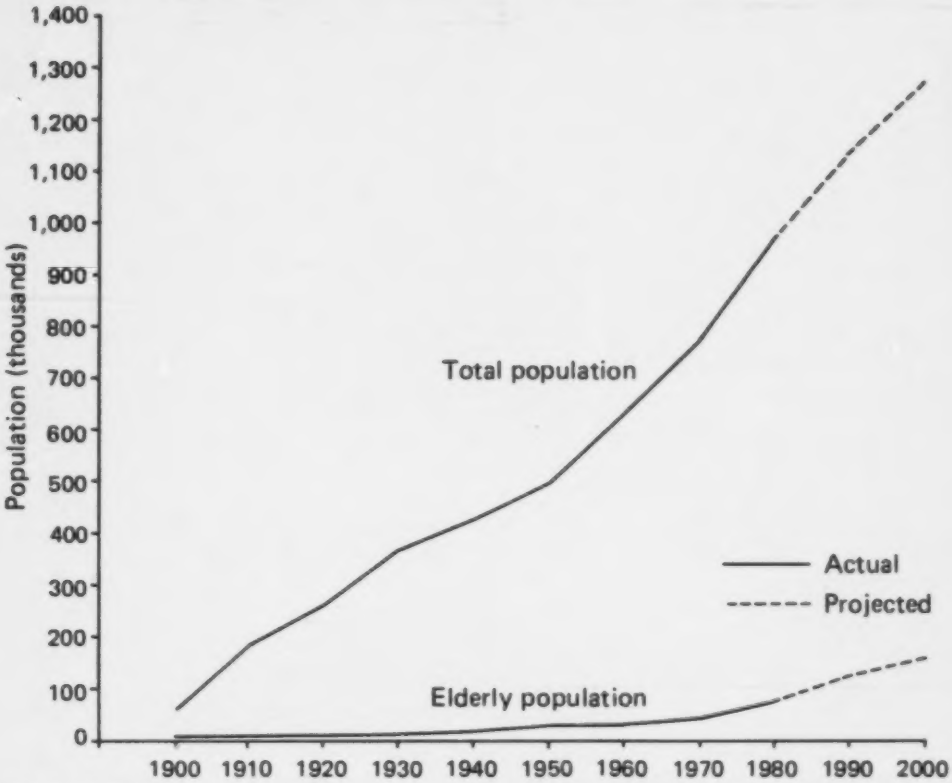
NOTE: For projections, total may not exactly equal male plus female figures because of rounding. Percentages may not sum to 100.0 because of rounding.

u–data unavailable.

a. Average annual growth rate in preceding decade.

b. Data for this age group included with ages 75+.

FIGURE 1. Growth of the total and elderly populations: Hawaii, 1900–2000

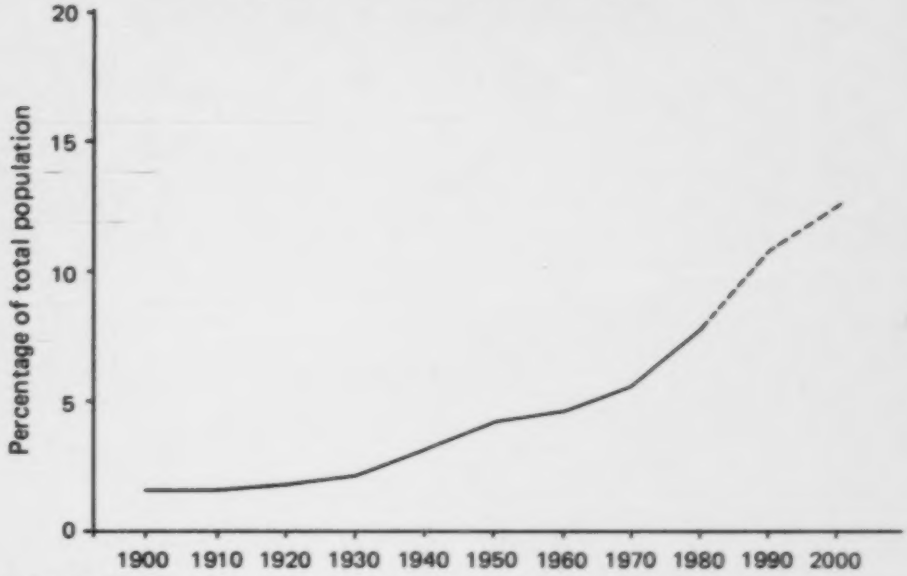


SOURCE: Table 1.

population of 2.3 percent. In 1900 there were only 2,677 persons of ages 65 and over in Hawaii, some 1.7 percent of the total population. By 1950, the number had reached 20,419, or 4.1 percent, and by 1980 it was 76,150, or 7.9 percent of the total. The elderly population has grown faster than the total population in every decade since 1910, and consequently its proportion of the total population has been constantly rising (Figure 2).

Projections of the state's population to the year 2000 based on various assumptions about fertility, mortality, and migration all show a steady growth of the total population and a rapid increase of the elderly component. According to figures used by the state M-F series population projections, the total population is expected to reach 1,267,800 in the year 2000 and to contain an elderly component of 159,500, representing 12.6 percent of the total (13.9 percent if the

FIGURE 2. Growth of the elderly population as a percentage of the total population: Hawaii, 1900–2000



SOURCE: Table 1.

military is excluded).[1] (See Hawaii, DPED 1984: tables 13 and B-1.) By the turn of the century, almost one in every seven civilian residents in Hawaii will be of age 65 or older.

Changes in the proportions of the population in the various age groups may be summarized through the use of the median age statistic. The median age for the total population was 26.9 years in 1900, fell steadily to 21.7 in 1930, and has since risen every decade except one to the 1980 level of 28.4 years. With the expanding presence of the elderly, the median age is expected to be almost 34 years by the year 2000.

1. Any analysis of the population of Hawaii is clouded by the presence of approximately 125,000 members of the armed forces and their dependents. This group is concentrated in the young adult ages and is predominantly male; its presence does not substantially affect our analysis of the elderly population, except where we discuss the latter as a component of the total. For example, when the military residents and their dependents are excluded from the state total resident population, the proportion of the elderly in the civilian population rises from 7.9 to 9.0 percent for 1980 (Hawaii, DPED, *Statistical Report* 163, 1983: table 4). As most available population data do not make a distinction between civilian and military residents, we must include the military here, and the reader should be aware that on occasion a small bias may result.

TABLE 2. Percentages of population of ages 65 and over: selected countries and areas, 1979–80

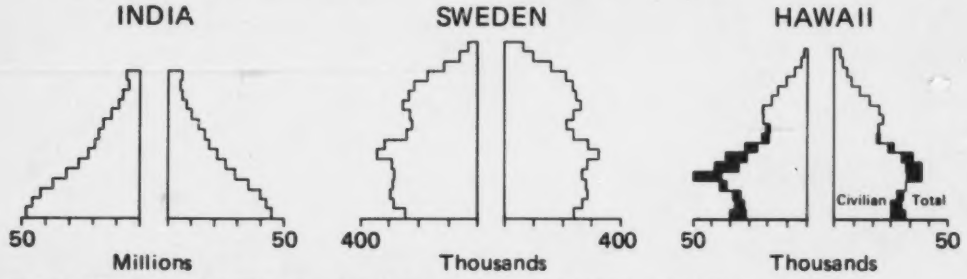
Country or area	%
World	5.8
Sweden	16.2
United Kingdom	14.8
Switzerland	13.7
New Zealand	9.2
Canada	9.0
Japan	8.8
Hong Kong	6.4
Singapore	4.8
Republic of Korea	4.0
Philippines	3.1
Western Africa	2.6
United States	11.2
Florida	18.1
New York	12.0
California	10.2
New Mexico	8.8
Hawaii	7.9
Alaska	2.6

SOURCES: United Nations, DIESA (1980: table A-6); United States, BOC (1980: table 5).

Although its population has been steadily aging, Hawaii in 1980 had a lower proportion of its population in the elderly ages than did the United States as a whole (Table 2), ranking 49 out of the 50 states. This was the result of the military presence and of relatively high levels of migration to the state by persons of young adult ages. The United States ranks among those countries of the world with rather high proportions of elderly. Such countries are mostly industrialized, developed nations with recent histories of low fertility; low fertility levels over a long period of time, as experienced by countries such as Sweden, the United Kingdom, and Switzerland, result in a high proportion of the population at the older ages.

The age distribution of a population can be displayed graphically through the use of the population pyramid. We can compare the pyramid of Hawaii, which represents the population of military and civilian groups, with that of India, a developing country with high

FIGURE 3. Population by age and sex: India, Sweden, and Hawaii, 1980



SOURCES: Hawaii, DPED, *Statistical Report,* No. 163 (1983: table 4); United Nations, DIESA, *Demographic Yearbook* (1983: table 7); United States, BOC (1982: table 19).

fertility and a young population, and with that of Sweden, a developed country with low fertility and an old population (Figure 3). Hawaii's population pyramid is intermediate to these two, with a base that is narrower than India's but broader than Sweden's. The contraction at the base of Hawaii's pyramid reflects recently lowered numbers of births in the state, which will be reflected in six decades or so by falling numbers of local-born entrants into the elderly age groups. The bulge in the middle of the pyramid, especially for males, reflects the presence of members of the military.

COMPONENTS OF CHANGE IN THE ELDERLY POPULATION

In any population, there are only four possible sources of change in the size of that population: fertility, mortality, migration into, and migration out of the population. If we look at the elderly as a separate population, the situation is slightly changed: instead of fertility, or entrants into the population through births, we have entrants into the population through the aging of younger individuals, who are "born" into the elderly population upon reaching their 65th birthday. The "births" to the elderly population, then, are actually the survivors of real births that occurred 65 years earlier and can be subdivided into the aging of the native-born population and the aging of the migrant population.

Of the two other components of change in the elderly population, mortality poses no major problems in measurement, but migration is more difficult to assess because there are no strict records of interstate and international movement.

Insofar as the data allow us, we will now examine each of these sources of change.

Growth through aging

An examination of persons 65 years old enumerated by the 1980 Census illustrates the growth of the elderly population through aging. These individuals were born during the year from April 1, 1914, through March 31, 1915. Hawaii births during that 12-month period numbered about 7,160 (Hawaii, TBOH, 1915:11; 1916:10). Discounting any migration and according to mortality during the 1915–80 period, we would expect between 4,300 and 4,900 survivors of those births to be 65 years old at the 1980 Census.[2] Actually the census recorded about 6,600 persons of age 65, or some 35 to 54 percent more than expected. These "extra" individuals must have been those who were still alive among the migrants into the state since 1915. Thus the entrants into the elderly population in 1980 were composed both of the survivors of persons born in Hawaii 65 years earlier and the survivors of individuals born elsewhere 65 years earlier who subsequently migrated to Hawaii.

Because the number of births in Hawaii rose after 1915 (peaking first in 1926 at 12,282 and again in 1962 at 17,932), we can expect that the number of entrants into the elderly group will rise in the coming years. Similarly, the results of fluctuations in net migration below age 65 will appear as future additions to the elderly.

Mortality

The crude death rate for the total population of Hawaii has fallen from a level of around 15.5 deaths per 1,000 population in 1912–20 to about 5 deaths per 1,000 population in recent years. Improved sanitation, the prevention and control of communicable diseases, the introduction of antibiotics, and numerous other changes have contributed to this decline. Life expectancy in Hawaii is now among the highest in the world (Gardner, 1980:221). See Table 3.

The elderly have shared in the general improvement in mortality levels. Percentage increases in life expectancy at age 65 for both males and females from 1920 to 1980 were usually only slightly less than the increases in life expectancy at birth, or age 0 (Table 4). Japanese

2. Calculated by applying survival ratios from successive life tables.

TABLE 3. Life expectancy at birth (e_0) for selected low- and high-mortality areas: recent data

Area	Date	e_0 Male	e_0 Female
Hawaii	1979–81	75.0	81.5
Low-mortality areas			
Australia	1981	71.4	78.4
Canada	1975–77	70.2	77.5
England and Wales	1978–80	70.4	76.6
Hong Kong	1973	67.9	74.3
Iceland	1979–80	73.7	79.7
Japan	1981	73.8	79.1
Soviet Union	1971–72	64.0	74.0
Sweden	1981	73.0	79.1
United States	1980	70.0	77.5
High-mortality areas			
Afghanistan	1975–80	42.0	43.4
Angola	1975–80	39.5	42.6
Bolivia	1975–80	48.4	53.1
Gambia	1975–80	39.4	42.6
Ghana	1975–80	46.7	50.0
Haiti	1975–80	49.1	52.2
India	1975–80	52.0	51.0
Indonesia	1975–80	48.7	51.3
Nicaragua	1975–80	53.5	57.1
Papua-New Guinea	1975–80	50.0	49.5
Yemen	1975–80	38.7	40.3

SOURCES: United Nations, DIESA, *Demographic Yearbook* (1980: table 34; 1984: table 21); Gardner (1984); United States, DHHS (1984: table 6-1).

and Chinese life expectancy both at birth and at age 65 exceeds that of the other ethnic groups (Figure 4).

The proportion of resident deaths that occurred to the elderly rose during 1960–80 (Table 5), but such a statistic is misleading because of the changes occurring in the age structure. If we look at the age-specific death rates for the elderly age groups (Table 6), we find that death rates for the young-old fell by almost 40 percent over the period, while the death rates for the old fell almost as much and those of the old-old fell by more than a quarter. (The death rate for the total population, adjusted for age changes, fell by 35 percent during the period.) Such changes by themselves would result in a growing

TABLE 4. Life expectancy at birth and at age 65 by sex and ethnicity: Hawaii, 1920–80

Sex and ethnicity	At birth				1920–80 % increase	At age 65				1920–80 % increase
	1920	1950	1970	1980		1920	1950	1970	1980	
All ethnic groups										
Both sexes	46.9	69.6	74.0	78.0	66.3	11.7	14.9	16.5	19.2[a]	64.1
Men	46.9	68.0	72.0	75.0	59.9	11.7	14.3	15.6	17.5	49.6
Women	46.8	71.9	76.4	81.5	74.1	11.7	16.0	17.5	21.1	80.3
Caucasians										
Both sexes	57.0	69.6	73.2	76.4	34.0	13.6	14.5	15.9	18.0	32.9
Men	55.0	66.4	70.7	74.2	34.9	12.8	12.9	14.2	17.4	35.9
Women	60.1	73.9	76.0	79.1	31.6	14.9	16.2	17.4	18.7	25.5
Chinese										
Both sexes	54.8	69.8	76.1	80.2	46.4	13.1	13.8	17.1	19.1	45.8
Men	53.9	69.1	74.8	78.4	45.5	13.0	13.4	16.5	18.1	39.2
Women	57.1	70.9	77.6	81.7	43.1	14.1	14.6	17.7	19.9	41.1
Filipinos										
Both sexes	32.9	69.7	71.8	78.8	139.5	18.1	16.2	15.1	18.2	12.3
Men	32.8	69.4	70.2	77.3	135.7	18.9	16.2	14.6	17.9	10.5
Women	29.1	69.4	75.5	81.0	178.4	14.9	15.9	16.9	19.4	22.0
Hawaiians										
Both sexes	35.0	62.6	67.5	74.0	111.4	8.7	11.4	13.5	17.2	50.9
Men	35.9	61.3	65.1	70.9	97.5	8.6	10.5	12.8	16.2	54.3
Women	34.2	64.0	69.9	76.0	122.2	8.7	12.3	14.2	17.5	42.3

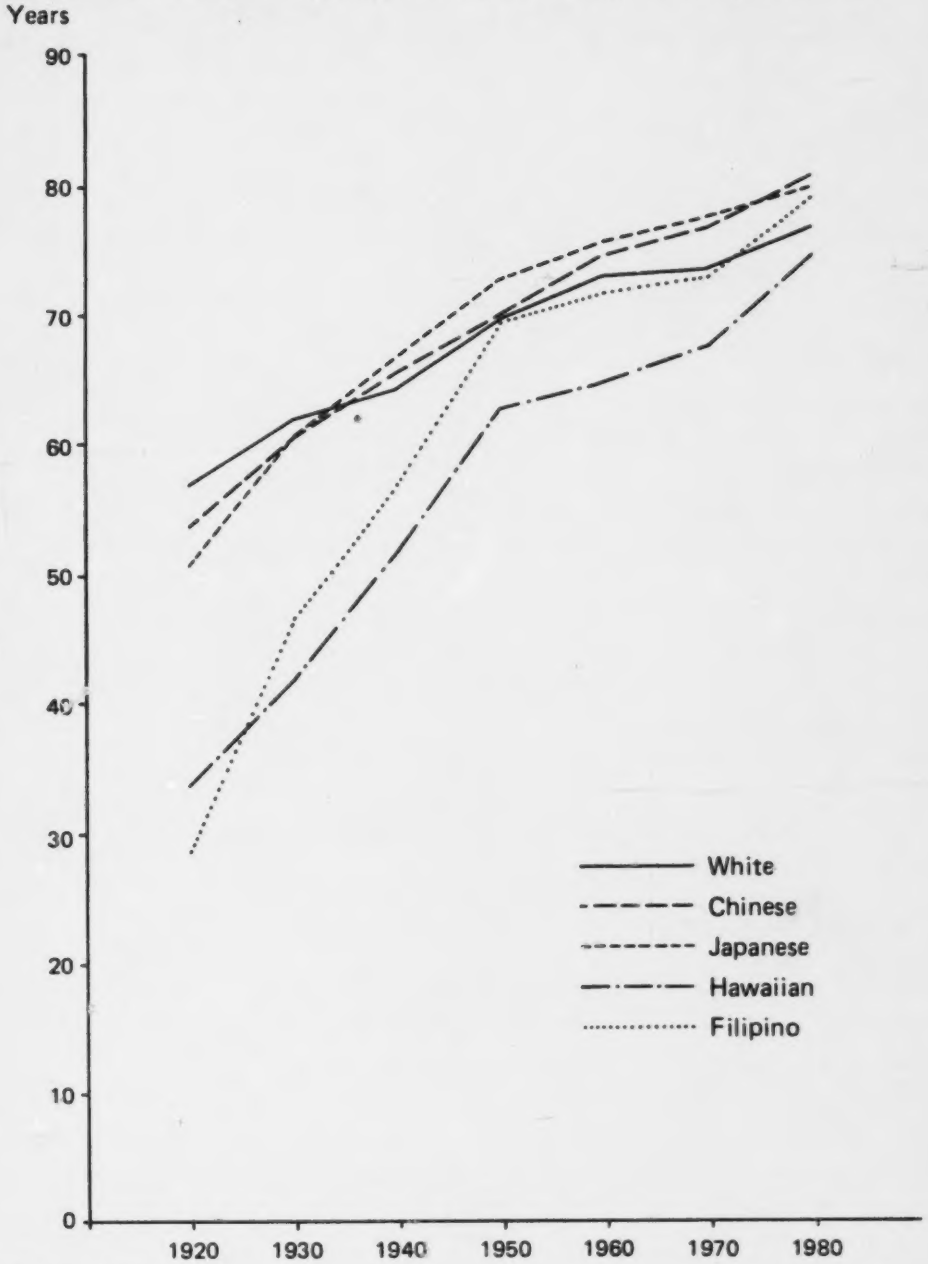
TABLE 4. *(continued)*

Sex and ethnicity	At birth 1920	1950	1970	1980	1920–80 % increase	At age 65 1920	1950	1970	1980	1920–80 % increase
Japanese										
Both sexes	51.2	72.6	77.3	79.7	55.7	13.1	15.9	18.0	19.1	20.1
Men	51.3	71.1	75.7	77.7	51.5	13.2	15.2	17.5	18.3	20.4
Women	52.0	74.5	78.9	81.5	56.2	12.3	16.9	18.4	19.8	17.2
Others										
Both sexes	28.9	67.6	76.9	76.6	165.1	8.4	14.7	18.0	18.0	22.4
Men	28.3	65.6	75.3	72.6	156.5	7.8	14.2	18.5	16.5	16.2
Women	28.6	71.1	78.4	78.1	173.1	11.0	16.3	17.4	18.1	11.0

SOURCES: Park et al. (1979); Gardner (1984).

a. 1980 figure for both sexes is derived by a slightly different methodological procedure utilizing detailed data not available by ethnicity. See Gardner (1984:4).

FIGURE 4. Life expectancy at birth by ethnicity: Hawaii, 1920–80



SOURCE: Table 4.

TABLE 5. Resident deaths and death rates of total and elderly populations: Hawaii, 1960, 1970, and 1980

	1960		1970		1980	
Age group	Number	%	Number	%	Number	%
Number of deaths						
All age groups	3,541	100.0	4,023	100.0	4,903	100.0
0–64	1,886	53.2	1,991	49.5	1,998	40.8
65+	1,655	46.8	2,032	50.5	2,905	59.2
65–74	721	20.4	814	20.2	1,091	22.3
75–84	659	18.6	791	19.7	1,104	22.5
85+	275	7.8	427	10.6	710	14.5
Crude death rates (CDR) (deaths per 1,000 population of all ages)		5.6		5.4		5.4
Age-specific death rates (ASDRs) (deaths per 1,000 population of specified ages)						
65–74		36.7		27.6		22.1
75–84		83.0		68.1		52.0
85+		174.1		141.7		127.7
Age-standardized death rates (SDR)[a] (deaths per 1,000 population of all ages)		8.4		7.3		5.5

SOURCES: Hawaii, DOH, *Annual Report: Statistical Supplement* (1980: table 28); United States, BOC (1961: table 16; 1971: table 20; 1981).

a. The SDR takes the age structure of the population into account and thus presents a summary picture of mortality independent of age-structural effects.

number of elderly even if the number of individuals entering the group at age 65 remained constant from year to year and even if net migration into the group were zero.

It may be expected that future medical advances in the control of disease will disproportionately benefit the elderly, which is the group in which most deaths occur now. This being the case, we can expect falling mortality to result in a continuing increase in the numbers and proportion of elderly in the state.

Migration

The elderly population can change in size because of the effects of migration to and from Hawaii of individuals 65 and older. It is

TABLE 6. Percentage decrease in crude death rate (CDR) for total population, standardized death rate (SDR), and age-specific death rates for elderly age groups: Hawaii, 1960–80

Rate	% decrease
CDR, total population	3.6
SDR, total population	34.5
ASDRs, elderly population	
65–76	39.8
75–84	37.4
85+	26.7

SOURCE: Table 5.

impossible to arrive at a precise estimate of the number of such migrants, because the necessary vital statistics and migration statistics are not available. However, if we apply prevailing survival ratios to the population of ages 55 and above in 1970 and compare the expected 1980 elderly population obtained in this way with the actual elderly population, we find that approximately nine thousand of the 76,150 elderly in 1980, or about one in eight, were survivors of migrants to the state during the previous ten years. This estimate is based on several assumptions and should be taken more as an indication of the order of magnitude of the effect of migration than as a precise figure.

In 1980 some 7.4 percent of the elderly in Hawaii had been living outside the state five years earlier (Table 7). Women showed slightly higher percentages of recent migrants than men. The older elderly showed lower percentages than did the younger elderly (data not shown).

We thus find the elderly population growing because of all basic factors: rising numbers of births in Hawaii in the early years of this century, migration into the state by younger groups who then aged, falling mortality, and net migration into the elderly groups.

If we look at a series of population pyramids for Hawaii for the period 1900–80 (Figure 5), we can see the contribution of these factors to the aging of the population (Nordyke, 1977:65–74). The effect of early heavy immigration of males is seen to pass upward through the pyramids, concentrating in the older ages in recent years. The aging of male immigrant groups is especially evident in the

TABLE 7. Residence in 1975 for total and elderly populations: Hawaii, 1980

Population group and 1975 residence	Number	%
All persons, ages 5+	888,056	100.0
Hawaii	685,882	77.2
Different U.S. state	149,919	16.9
Outside U.S.	52,255	5.9
All persons, ages 65+	76,029	100.0
Hawaii	70,389	92.6
Different U.S. state	3,684	4.8
Outside U.S.	1,956	2.6

SOURCE: United States, BOC (1983a: table 200).

NOTE: Data are estimates from a sample. Total number of elderly thus differs slightly from the full-count figures in Table 1.

population pyramids of the Chinese and the Filipino groups (Figure 6). Lowered fertility results in pyramids with progressively steeper sides at the younger ages; falling fertility lowers the proportion of the young and hence leads to higher proportions of the elderly.

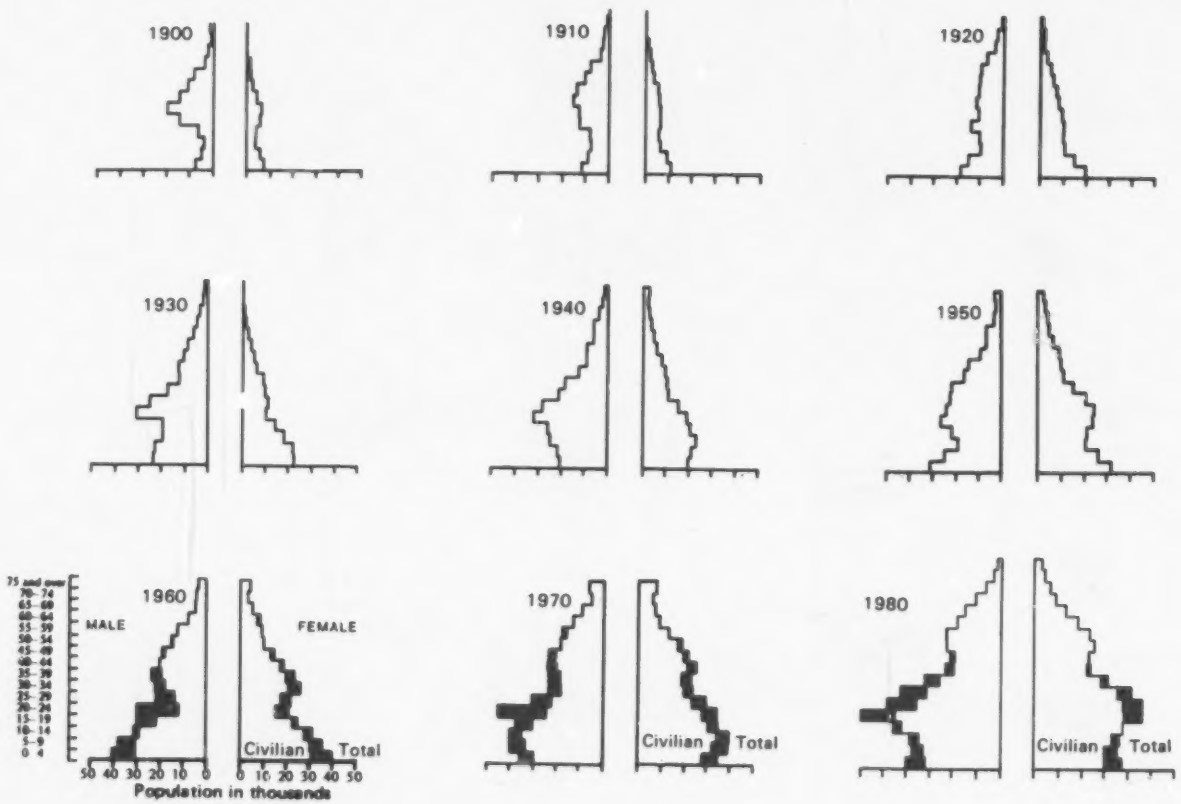
CHARACTERISTICS OF THE ELDERLY POPULATION

Geographic distribution

Honolulu County, with a population in 1980 of 762,565, or 79.1 percent of the total state population, has the largest number of the elderly among the state's counties–55,368. This number represents, however, only 72.7 percent of all persons 65 years old and over in Hawaii (Table 8). Conversely, all of the other counties have higher numbers and proportions of the elderly than one would expect, given the overall population distribution. These figures, however, are confounded by the presence of the armed forces and their dependents, who are concentrated in Honolulu County. Without the military population, the distribution of the elderly among the counties would be more closely aligned with the distribution of the total population.

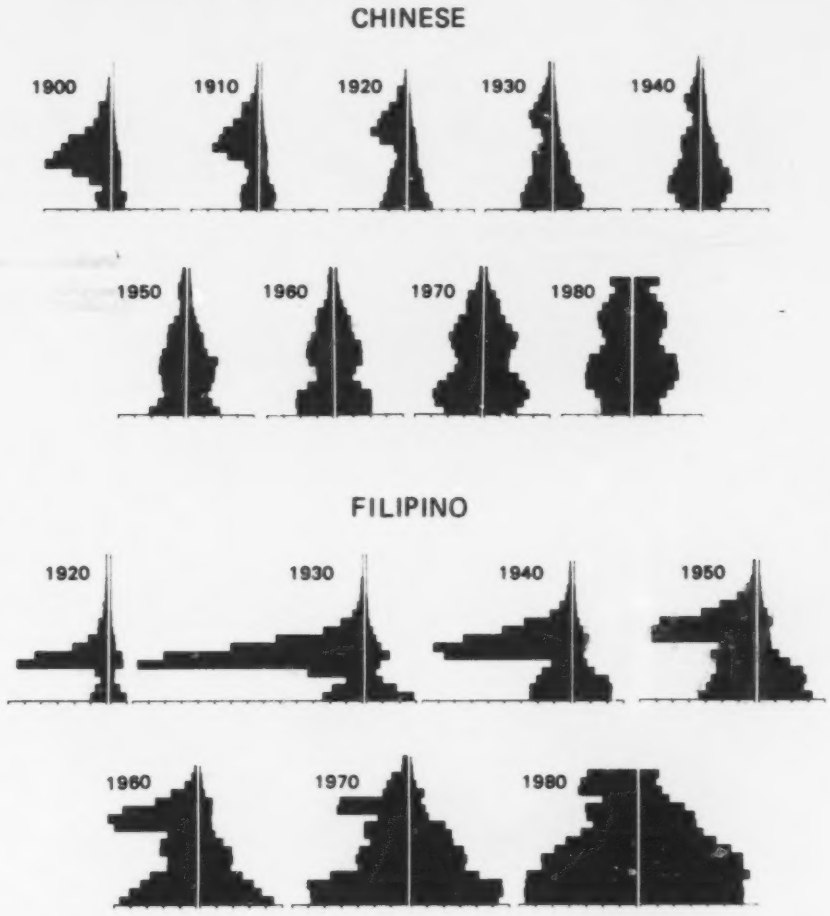
In Honolulu a few districts have exceptionally high proportions of the elderly among their populations. Concentrations are found in the residential areas of Waikiki Beach, Diamond Head, Kapiolani Park, and

FIGURE 5. Population by age and sex: Hawaii, 1900–80



SOURCE: Gardner, Nordyke, and Levin (1984).

FIGURE 6. Population of Chinese and Filipinos by age and sex: Hawaii, 1900–80



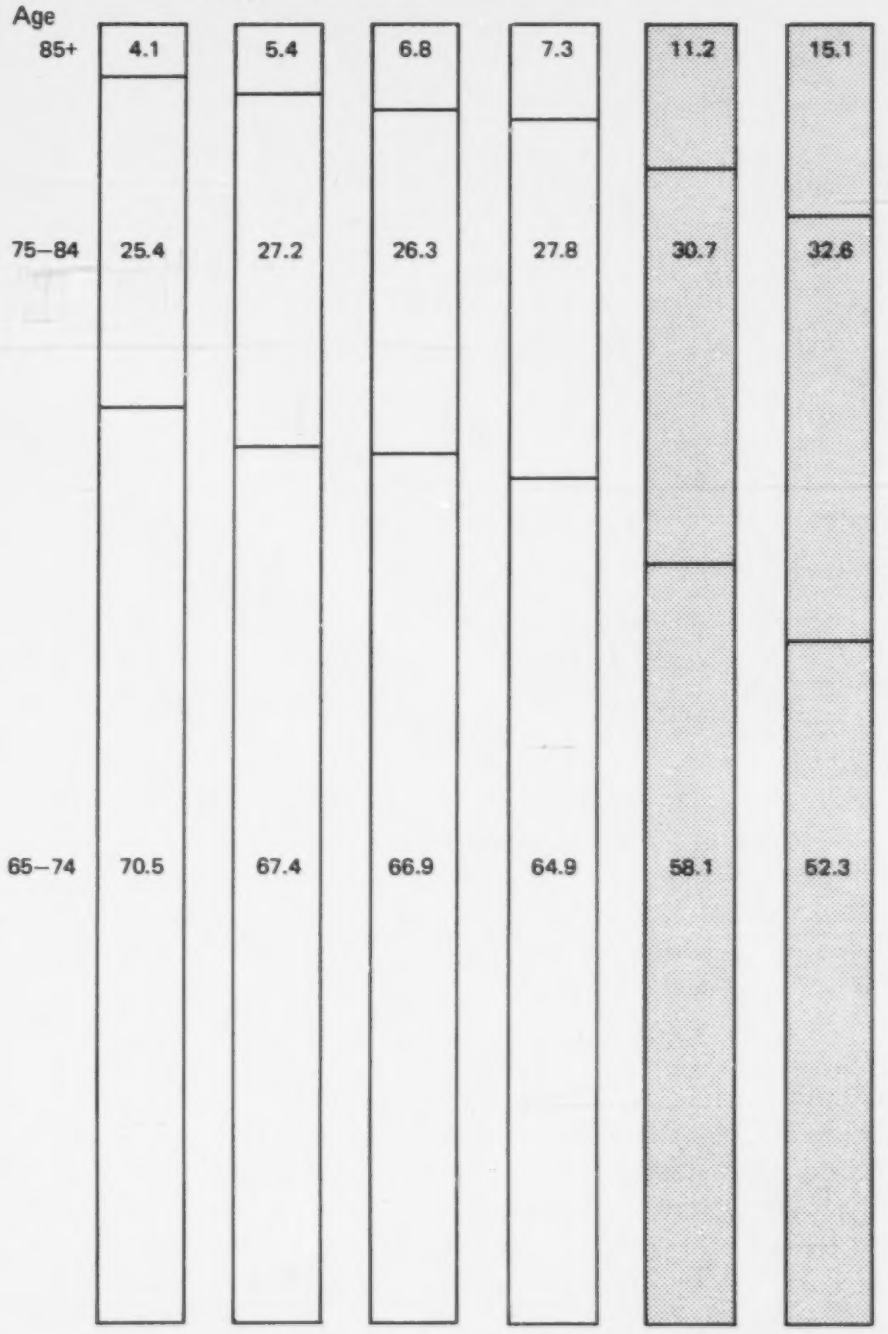
SOURCE: Nordyke (forthcoming).

Ala Moana (United States, BOC, 1981). These districts contain many condominiums and cooperative apartments that have regulations forbidding occupancy by families with young children and favoring older applicants.

Age structure

Changes have occurred in the growth and distribution of the age groups *within* the elderly population (Figure 7). The young-old accounted for 64.9 percent of the elderly in 1980, down from 70.2

FIGURE 7. Elderly population by percentage in each age group: Hawaii, 1950–2000



SOURCE: Table 1.

TABLE 8. Residence by county and sex for total and elderly

Item	Population					
	State			Hawaii County		
	Males	Females	Total	Males	Females	Total
Population						
All ages	494,683	470,008	964,691	46,665	45,388	92,053
Elderly						
65+	38,359	37,791	76,150	5,102	4,276	9,378
65–74	26,375	23,000	49,375	3,445	2,645	6,090
75–84	9,973	11,241	21,214	1,364	1,220	2,584
85+	2,011	3,550	5,561	293	411	704
Population as % of state total population						
Total	100.0	100.0	100.0	9.4	9.7	9.5
Elderly	100.0	99.9	100.0	13.3	11.3	12.3
Elderly population as % of state or county population	7.8	8.0	7.9	10.9	9.4	10.2

SOURCE: United States, BOC (1981).

NOTE: Percentages may not sum to 100.0 because of rounding.

percent in 1900 and from a high of 78.3 percent in 1940. State government population projections indicate this figure will fall to 52.3 percent by the year 2000. Both of the older groups will gain at the expense of the young-old. The old-old, currently comprising 7.3 percent of the elderly, are projected to account for 15.0 percent by the turn of the century, when this group will be over four times as numerous as it was in 1980. The median age for the elderly is expected to rise from 72.1 years in 1980 to 74.5 years 20 years later. Not only is the total population of Hawaii growing older, its elderly population is growing older as well.

Sex ratios

Population pyramids may also be used to examine the sex ratios of various age groups in a population. The sex ratio, which is the number of males per 100 females, has historically been high in Hawaii. This may be observed from the larger left halves of the pyramids. Males came to Hawaii as adventurers, seamen, agricultural workers, businessmen, and armed forces personnel. Early in the century the sex ratio was extremely high (Table 9). Gradually, with the immigration of

populations: Hawaii, 1980

Honolulu County			Kauai County			Maui County		
Males	Females	Total	Males	Females	Total	Males	Females	Total
391,903	370,662	762,565	20,052	19,030	39,082	36,063	34,928	70,991
27,051	28,317	55,368	2,480	1,859	4,339	3,726	3,339	7,065
18,740	17,192	35,932	1,672	1,138	2,810	2,518	2,025	4,543
6,943	8,485	15,428	664	573	1,237	1,002	963	1,965
1,368	2,640	4,008	144	148	292	206	351	557
79.2	78.9	79.1	4.1	4.0	4.0	7.3	7.4	7.4
70.5	74.9	72.7	6.5	4.9	5.7	9.7	8.8	9.3
6.9	7.6	7.3	12.4	9.8	11.1	10.3	9.6	10.0

women as "picture brides," workers, and wives, and with the birth of new generations, the sex ratio has fallen to more normal levels.

Because the early immigration was dominated heavily by males, the sex ratio of the surviving older population has remained rather high, despite the fact that males almost universally have higher death rates than females at all ages. In the United States in 1980, there were only 67.6 males for every 100 females in the age group of 65 and above (United States, BOC, 1983b:31) compared with 101.5 in Hawaii. As the last lingering remnants of the contract labor male-dominant migration die out, however, the sex ratio among the elderly is projected to fall, and it is expected that by the year 2000 there will be only about 79 males for every 100 females (calculated from Table 1).

The various ethnic groups show different patterns of sex ratios among the elderly and changes in these ratios over time, reflecting the migration histories of the groups. The Chinese elderly sex ratio peaked at over 1,900 males for every 100 females in the year 1910; the Japanese showed a high of 1,650 in 1910; Filipinos showed a value of 611 when they first appeared as a separate group in the 1920 census; and Koreans had a value of over 355 in 1930. Most of these groups now

TABLE 9. Sex ratio by ethnicity for total and elderly populations: Hawaii, 1900–80

	1900	1910	1920	1930	1940	1950	1960	1970	1980
Total, all ages	223.4	178.9	144.3	152.8	137.6	121.2	114.8	108.1	105.2
Total, ages 65+	186.9	208.4	232.1	241.6	196.5	154.1	116.8	101.8	101.5
Ethnic groups, ages 65+									
Hawaiians	155.3	153.8	138.8	126.7	124.1	111.1	103.5	u	u
Part-Hawaiians	120.0	111.1	168.1	119.1	82.4	77.0	79.0	95.9	75.1
Whites	202.7	149.6	141.7	131.8	94.6	87.0	82.7	79.1	83.6
Japanese	500.0	1,650.0	690.6	367.0	229.3	160.5	105.4	83.2	83.2
Chinese	1,700.0	1,937.9	1,861.1	1,182.3	571.2	253.3	132.8	101.2	89.7
Filipinos	u	u	611.1	392.0	466.7	496.5	600.7	338.5	307.0
Koreans	u	120.0	266.7	355.6	u	u	u	55.9	60.7
Blacks	u	u	u	u	u	u	70.6	153.8	114.3
Others	u	820.0	433.3	412.5	375.7	407.9	253.3	87.3	84.9

SOURCE: Gardner and Nordyke (1974: table 6); Nordyke (1977: tables 4a, 4b); United States, BOC (1982: tables 19, 22).

NOTE: Sex ratio is the number of males per 100 females.

u—data unavailable.

show elderly sex ratios well below 100. The nonimmigrant groups (either local-born or in-migrants from the mainland United States) also show relatively low sex ratios currently for the elderly, although they were unusually high in the early years of the century.

Ethnicity

One encounters many problems when dealing with data on ethnicity and race in Hawaii. This is true for several reasons. The first has to do with the fact that any attempt to classify the population by ethnicity must be either too complicated and cumbersome to be workable, on the one hand, or too simplified and abstract to really reflect the true situation, on the other. With the large number of "pure" ethnic groups in Hawaii, the number of possible combinations, or "mixed" ethnicities, is extremely large, and undoubtedly most of these have occurred. Any listing of them, even if the data could be collected, would be far too long to be of any use; any combination of them into a smaller number of categories would sacrifice the richness of the data and conceal important details. The second reason is that no single system of classification, however arbitrary and problematic, has ever been agreed upon by the authorities and groups who collect data on ethnicity in Hawaii. For example, the United States Bureau of the Census over the decades has changed its rules and procedures for assigning and tabulating race. Thus, even with a "single" data source, there is no consistency in definitions of ethnicity. The Hawaii State Department of Health, which is responsible for collecting data on vital statistics, uses an approach close to that used by the Census Bureau several decades ago. Department of Health data are therefore not comparable with U.S. Census data, and any attempt to utilize the two together is not statistically valid.

The 1980 data presented in Table 10 are from the U.S. Census, which used a system of self-classification for ethnicity. The category of "Caucasian" has been assigned to all those who stated they were white, plus those who called themselves German, Canadian, and others. "Black" includes people calling themselves Black or Negro, or Black Puerto Rican, Jamaican, and others. Other major groups, as listed in the table, are treated similarly. People of mixed descent who did not assign themselves a single ethnicity have been assigned the ethnicity of their mothers; if this is not possible, the first-named ethnicity in the mixture is taken as the individual's ethnicity. Thus the census has no

"mixed" category, yet a high proportion of Hawaii's people are of mixed ethnicity.

Hawaii's population is famous for its multiethnic character, and the elderly population is as diverse as the total (Table 10). In the total population, Caucasians and Japanese dominate numerically, followed by Filipinos, Hawaiians, Chinese, and other groups. The distribution among the elderly is somewhat different, however, owing to the different histories and age structures of the various ethnic groups. Japanese are the most numerous of the elderly, accounting for 35.6 percent of the total. Caucasians are in second place at 28.3 percent. Filipinos and Chinese represent a slightly higher proportion of the elderly population than of the total population of the state, while the Hawaiian share of the elderly population (6.9 percent) is far below its 12.0 percent share of the total population.

We can look at the figures on ethnicity in a different way, examining each group separately. The Chinese and Japanese have the highest proportion of elderly among their members, over 11 percent, followed by Filipinos, Caucasians, and Koreans. Hawaiians and Samoans, with high levels of fertility and with selective in-migration for the latter, and Blacks, with many military members, have very low proportions of elderly. Such differences imply variation among the ethnic groups in family structures and relationships as well as in needs for health care, facilities for the aged, and other services.

The geographical distribution of the state's ethnic groups reflects current and historical patterns in labor recruitment and migration. Elderly Japanese are found in relatively high proportions on the islands of Kauai and Maui, elderly Filipinos have a large concentration on Kauai, older Chinese tend to be found on Oahu, and older Caucasians are found mostly on Oahu and the island of Hawaii.

Marital status

Marital status data for the elderly reflect the combined effects of sex ratios, marriage, mortality differentials, and cultural patterns. Among elderly males in 1980, a high proportion (78 percent) were currently married (Table 11). The number of married elderly men (33,329) far outnumbered the number of married elderly women (19,630). In 1979 about 42 percent of the elderly married men had wives under age 65 (Hawaii, DOH, *Health Surveillance Program,* 1979). Only 14 percent of the elderly men were currently widowed in 1980, compared

TABLE 10. Elderly population by age and ethnicity: Hawaii, 1980

Age group	All ethnicities	Whites	Chinese	Filipinos	Hawaiians	Japanese	Koreans	Blacks	Samoans	Others[a]
65–69	29,153	8,498	2,404	4,658	2,217	10,144	393	64	158	617
70–74	20,222	5,952	1,640	4,148	1,458	6,222	279	45	69	409
75–79	13,673	3,570	2,538	3,921	1,538	10,756	376	25	88	425
80–84	7,541	2,076	u	u	u	u	u	8	u	u
85+	5,561	1,446	u	u	u	u	u	8	u	u
65+										
Number	76,150	21,542	6,582	12,727	5,213	27,122	1,048	150	315	1,451
%	100.0	28.29	8.64	16.71	6.85	35.62	1.38	0.20	0.41	1.90
All ages										
Number	964,691	318,770	56,285	133,940	115,500	239,748	17,962	17,364	14,073	51,049
%	100.0	33.05	5.83	13.89	11.97	24.85	1.86	1.80	1.46	5.29
% 65+ of the total population of each ethnicity	7.89	6.76	11.69	9.50	4.51	11.31	5.83	0.86	2.24	2.84

SOURCE: United States, BOC (1982: tables 19, 22).

u–data unavailable.

a. Category includes American Indians, Eskimos, Aleuts, Asian Indians, Vietnamese, Guamanians, and others.

TABLE 11. Elderly population by sex and marital status: Hawaii, 1980

	Men			Women		
Marital status	65–69	70–74	75+	65–69	70–74	75–79
Now married						
Number	15,898	9,534	7,897	11,138	5,536	2,956
%	85.1	79.3	66.4	66.8	56.3	23.5
Widowed						
Number	900	1,507	3,448	4,643	3,762	9,323
%	4.8	12.5	29.0	27.8	38.2	74.2
Divorced, separated						
Number	637	533	218	531	381	83
%	3.4	4.4	1.8	3.2	3.9	0.7
Never married						
Number	1,162	453	333	276	161	204
%	6.2	3.8	2.8	1.7	1.6	1.6
Unknown						
Number	84	0	0	96	0	0
%	0.5	0.0	0.0	0.6	0.0	0.0
All marital statuses						
Number	18,681	12,027	11,896	16,684	9,840	12,566
%	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Hawaii, DOH, *Health Surveillance Program* (1980), special tabulation.
NOTE: The Health Survey population estimates differ slightly from U.S. Census totals.

with 45 percent of the elderly women, a reflection of differential mortality and of males marrying younger females. Almost a fourth of Filipino men above age 75 in 1975 had never married, compared with only 3.6 percent of the Japanese men of that age (Survey and Marketing Services, Inc., 1976: special tabulation). This situation reflects the fact that almost all the Filipinos who migrated to Hawaii in the early years of this century were male plantation laborers.

A vast majority (77.6 percent) of the elderly in Hawaii in 1980 lived with their family members or friends, well above the national average (estimated at 28.2 percent). Only 16.3 percent of persons 65 years old and older lived alone, and 4.9 percent lived in institutions or group quarters (Hawaii, Office of the Governor, EOA and CPHF, 1982:93).

Both sexes			Total, ages 65+		
65–69	70–74	75–79	Men	Women	Total
27,036	15,070	10,853	33,329	19,630	52,959
76.4	68.9	44.4	78.2	50.3	64.8
5,543	5,269	12,771	5,855	17,728	23,583
15.7	24.1	52.2	13.7	45.4	28.9
1,168	914	301	1,388	995	2,383
3.3	4.2	0.0	3.3	2.5	2.9
1,438	614	537	1,948	641	2,589
4.1	2.8	2.2	4.6	1.6	3.2
180	0	0	84	96	180
0.5	0.0	0.0	0.2	0.2	0.2
35,365	21,867	24,462	42,604	39,090	81,694
100.0	100.0	100.0	100.0	100.0	100.0

Education

The educational level of Hawaii's population has risen rapidly in the past; but the elderly, especially those 75 and older who migrated here with a minimum of formal education, have very low levels of educational attainment (Table 12). In 1980 persons of ages 25 and over had finished a median of 11.7 years of school. In contrast, persons over age 65 reported 7.7 median years of school completed. This is somewhat lower than the 1980 U.S. figure of 9.0 years of schooling for the elderly (United States, BOC, 1984: table 262).

Elderly males in 1950 and 1960 showed a higher level of educational attainment than elderly females, but by 1970 older females were showing slightly higher levels of schooling (Table 13). Data for 1980 indicate males with higher educational attainment at the young-old and

TABLE 12. Educational attainment of elderly population: Hawaii, 1980

Years of school completed	Total 65+	65–69	70–74	75+
None				
Number	6,720	1,084	1,067	4,029
%	8.8	3.8	7.8	15.0
1–4				
Number	10,757	3,116	2,842	4,799
%	14.2	10.9	13.8	17.9
5–8				
Number	23,893	8,776	6,560	8,557
%	31.5	30.6	32.0	31.9
9–11				
Number	7,775	3,732	2,042	2,001
%	10.2	13.0	9.9	7.5
12				
Number	13,472	6,609	3,442	3,421
%	17.7	23.1	16.8	12.8
13–15				
Number	5,497	2,180	1,623	1,694
%	7.2	7.6	7.9	6.3
16				
Number	4,091	1,496	1,257	1,338
%	5.4	5.2	6.1	5.0
17+				
Number	3,760	1,660	1,151	949
%	4.9	5.8	5.6	3.5
Total				
Number	75,965	28,653	20,524	26,788
%	99.9	100.0	99.9	99.9
Median (years)	7.7	8.7	7.7	6.2

SOURCE: United States, BOC (1983a: table 203).

NOTE: Percentages may not sum to 100.0 because of rounding.

old-old ages but females with a higher level at ages 70–74. Data on percentages of the age groups with high school education indicate near parity by sex at all elderly ages; the combined figures for 1980 were 42 percent for ages 65–69, 36.4 percent for ages 70–74, and 27.6 percent for the 75-plus group (United States, BOC, 1983a: table 203).

TABLE 13. Median years of schooling completed by age and sex, elderly population: Hawaii, 1950–80

Age group	1950		1960		1970		1980	
	Male	Female	Male	Female	Male	Female	Male	Female
65–69	4.2	2.6	5.4	4.7	8.0	8.0	8.9	8.5
70–74			5.4	4.4	6.7	6.9	7.5	8.0
75+	3.0	1.0	4.1	3.2	6.2	6.3	6.5	6.0

SOURCES: Schmitt (1977: table 9.10); United States, BOC (1983a: table 203).

Employment

Many people leave the labor force and begin their retirement at age 65. Nevertheless, a small but substantial proportion of the elderly continues to work. As shown in Table 14, in 1980 over 68 percent of the total Hawaii adult population was in the labor force (defined as working or seeking work during the reference week before the census), with males showing a higher rate of participation (78 percent) than females (58 percent). Labor force participation among the elderly was much less, but we still find nearly 15 percent of all persons 65 years old and over in the labor force. For men the figure was higher, at 20 percent, whereas for women it was 9 percent.

Labor force participation among the elderly drops with age, as one might expect. Over 23 percent of the 65- to 69-year-olds were in the labor force in 1980, but only 13.4 and 6.1 percent of the older groups. The patterns are similar for males and females, participation among males being higher in each age group.

In the total civilian labor force of Hawaii, some 4.7 percent were unemployed during the reference week. The figure was lower for the elderly, at 3.8 percent, and slightly lower for the male elderly than for the female. The overall figures and especially the elderly figures are all low by contemporary national standards and indicate that the elderly do not suffer much from unemployment in Hawaii.

Income

Because labor force participation is relatively low among the elderly, we present average figures for income and earnings only for individuals who actually had received income and earnings during the reference period. Income is a broad category that includes wages, interest, pension, and other income; earnings constitute a narrower category that

TABLE 14. Labor force status and unemployment by sex, total and elderly populations: Hawaii, 1980

Group	Number in group	Number in labor force	% in labor force	Number in civilian labor force	% of civilian labor force unemployed
Persons 16+	723,479	494,223	68.3	435,780	4.7
65+	75,965	11,061	14.6	11,052	3.8
65–69	28,653	6,673	23.3	6,673	3.3
70–74	20,524	2,757	13.4	2,757	4.1
75+	26,788	1,631	6.1	1,622	5.3
Males 16+	370,683	290,420	78.3	236,388	4.7
65+	38,174	7,649	20.0	7,640	3.1
65–69	15,238	4,443	29.2	4,443	2.8
70–74	10,952	2,072	18.9	2,072	3.7
75+	11,984	1,134	9.5	1,125	3.0
Females 16+	352,796	203,803	57.8	199,392	4.8
65+	37,791	3,412	9.0	3,412	5.3
65–69	13,415	2,230	16.6	2,230	4.2
70–74	9,572	685	7.2	685	5.3
75+	14,804	497	3.4	497	10.5

SOURCE: United States, BOC (1983a: table 213).

includes only wage and salary income and the income of the self-employed. In Hawaii the median income for males over age 18 *with income* in 1980 was $11,892 (Table 15). The mean income was much higher—$15,283—indicating an income distribution attenuated at the upper end. Female incomes were only 50–60 percent of male incomes. For individuals of ages 18 and over *with earnings,* the average incomes were slightly higher, and earnings accounted for over 90 percent of total income.

For the elderly (we have data only for ages 65 and over, not for the smaller age groups), those with income had much lower figures than for the total population: a median of $7,156 and a mean of $11,754 for men, and for women about 50 percent of that. For the elderly with earnings, mean earnings were lower than the average—$12,591 for men and $5,302 for women. Annual income for this group was nevertheless higher than the overall average. Many of the working elderly also receive income from pensions and other sources; for the elderly, therefore, earnings represented only about 62 percent (males) and 50 percent (females) of total income in 1980.

TABLE 15. Median individual income by age and sex, total and elderly populations: Hawaii, 1980

Group and income variable	Male	Female
Persons 18+ with income (number)	(339,402)	(273,369)
Median income	$11,892	$6,814
Mean income	$15,283	$8,227
Persons 18+ with earnings (number)	(295,347)	(216,407)
Mean annual income	$16,234	$9,071
Mean annual earnings	$14,969	$8,321
Earnings as % of income	92.2	91.7
Persons 65+ with income (number)	(36,997)	(34,357)
Median income	$7,156	$3,598
Ratio of 65+ to 18+	0.602	0.528
Mean income	$11,754	$6,322
Ratio of 65+ to 18+	0.769	0.768
Persons 65+ with earnings (number)	(10,780)	(4,958)
Mean annual income	$20,328	$10,684
Ratio of 65+ to 18+	1.252	1.178
Mean annual earnings	$12,591	$5,302
Ratio of 65+ to 18+	0.841	0.637
Earnings as percent of income	61.9	49.6

SOURCE: United States, BOC (1983a: table 237).

NOTES: Data are estimates based on a sample. "Income" includes all wage or salary income; nonfarm and farm self-employment income; interest, dividend, net royalty, and rental income; Social Security and Railroad Retirement; public assistance and welfare income; public and private pensions; and other income. "Earnings" include only wage and salary income and income from farm and nonfarm self-employment.

Thus the income of the elderly with earnings compares favorably with that of the total population. In fact, the group of earning males with the highest incomes, those of ages 45–54, had a mean income of $23,877, not much above that of the elderly males (United States, BOC, 1983a: table 237).

Health

Demographic, social, and medical measurements indicate that the elderly in Hawaii are healthier than the national average. Life expectancies in Hawaii are among the highest in the world, reflecting low mortality at all ages, including the older ages. Compared with the total United States, Hawaii's elderly have fewer illnesses that limit activity.

A 1974–76 Hawaii health survey showed that 75.9 percent of persons of ages 75 and above had one or more chronic conditions, compared with 87 percent for the total country (Hawaii Gerontology Center, 1979:9). The elderly who were unable to carry on major activities ranged from 13.2 percent of those 65–69 years old to 22.1 percent of those 75 and over, contrasted with 37 percent of persons 65 and over in the country as a whole who were limited in working or keeping house (United States, DHHS, Office of Human Development Services, 1980). Older people in Hawaii had about a one in 7.5 chance of being hospitalized in 1979, whereas the figure for the total United States was one in six.

SUMMARY AND CONCLUSION

The population of the elderly in Hawaii is a rapidly expanding component of the total population. This group represented almost 8 percent of the total in 1980 and is expected to account for almost 12 percent by the year 2000. If the military and their dependents are excluded, the elderly comprised 9.1 percent of the 1980 population and will represent almost 14 percent of the civilian resident population in the year 2000.

Although migration contributed to about half of the growth of the total population during the 1970–80 decade, it accounted for only about 12 percent of the increase of the number of persons 65 years old and over. Most of the growth of this group during the decade was the result of aging and lower mortality rates among the aged. In the absence of unexpected changes, both the number and the proportion of the elderly in Hawaii's population are projected to expand in the coming years. The elderly are primarily nonemployed persons with higher morbidity and mortality rates than the general population. The demographic facts about the elderly in Hawaii indicate that the state will face a challenge similar to that confronting many of the developed nations of the world today to meet the needs of a growing older population.

Older persons in Hawaii have some unique qualities: life expectancy exceeds that of other U.S. states and nations of the world, the sex ratio is relatively balanced, and four-fifths of the men and almost half of the women 65 years old and over are married. Although income levels of the elderly are low and the cost of living in Hawaii is high, a

large percentage of elderly persons allay financial stress by residing with relatives.

The current elderly population of Hawaii has the advantage of cultural and family support and favorable health, education, environment, and demographic indices. As the number of elderly expands in future decades, this group is expected to become an increasingly important force in the economic, political, and social life of the state.

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